2: Hickinbotham G-4, 5 (ca. 1931-ca. 1957)
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outside the town, and as darkness fell the guns of the fort roared to honour their still unfinished salute.

The next day the Political Officer took me to see the place where Seager had been attacked as he, all unsuspecting, walked with his wife, a brave lady who did her best to beat off her husband's assailants until the Government Guard escort could come up. They had been told by Seager to follow some little distance behind so that he and his wife could enjoy their stroll in private. There I found a small heap of stones marking the spot and I had them scattered because there was no point in perpetuating the memory of a shameful incident. Seager had, I am glad to say, recovered, and the would-be assassins had been punished, that is, those who had not fled to the security of the Yemen. As far as I was concerned the chapter was closed.

There was time to spare before we were due to lunch with the Naib, so I formed my escort into a line of beaters and for an hour or so we wandered over the slopes of the nearby hills and found some sura among the scrub. Then back across the plateau to Dhala and up to the castle where I had first stayed twenty years before.

The Naib met us at the entrance and after I had inspected the Guard of Tribal Guards I was ushered into a long narrow room where some of the guests had already assembled. We shook hands and took our seats on the floor around the walls. I was seated at one end on the right of the Naib and on his left was the Political Officer, and as more and more guests entered they gave the customary salutation and we rose and I shook hands with them and they took their places round the walls. The guests were a curious collection, most of those present being tribal leaders and notables from the area, but there were others from neighbouring districts and, of course, the soldiers of my escort and my own personal servants. The people of Dhala have one serious vice and that is that they grow and eat Qât, which absorbs a great deal of their vitality and practically all their money; in consequence, they are physically well below the ordinary standard of the Protectorate, and in appearance I think they are best described by the American adjective "mean". Personally, I have always liked the country better

is known of the mineral resources of the region, and most of the local industries are small and primitive. Salt is the chief export of the Colony; tobacco, honey and fish products, of the Protectorates.

The port of Aden is visited regularly by ships from all parts of the world. Within the last few years, the Colony has become a regional center for air services to Cairo and other cities in the Near East and East Africa. Communications between the Colony and the interior are mainly by roads and caravan trails, supplemented by a coastwise dhow trade. Camels and donkeys are the primary means of transport, but the use of motor vehicles is increasing along the main routes. Roads suitable for motor traffic link Aden Colony with certain population centers in Western Aden Protectorate, and Mukalla with the larger towns of the Hadhramaut and adjacent coastlands. Access to the interior is also provided by military air services.

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Food and Nutrition

Aden Colony is a cosmopolitan community, in which a variety of food habits is found among the peoples of different racial and economic groups. With the exception of fish, milk and limited supplies of garden vegetables, all foodstuffs are imported. Undernutrition is prevalent among the poorer inhabitants, and particularly among the transient laborers from the interior.

Food supplies are never abundant in the Protectorate, where cultivation is restricted by the nature of the terrain and the scarcity of water in many areas. Anything which interferes with normal production, such as droughts or an invasion of locusts, may result in local food shortages, often approaching famine conditions. The Hadhramaut was seriously affected during the widespread drought in 1943, and children were evacuated from some of the famine areas to relief camps in Mukalla.

The average Arab diet is simple, while that of the pastoral tribes is almost invari-

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of which are almost invariably associated with widespread undernutrition.

Diseases Spread on Contacted Causes Through Intestinal Infection, or Unsafe Water

Typhoid and Paratyphoid Fevers. Typhoid fever is sporadic, and 10 to 15 cases are reported from the Colony each year. Over one half of the known cases occur usually among nonresident laborers. Paratyphoid fevers are grouped with typhoid in the morbidity statistics. The rate of infection is not known, but both paratyphoid A and paratyphoid B fevers are undoubtedly present. Typhoid fever is apparently endemic in the Protectorate, although recognized cases are reputedly rare in the Hakkanese.

Dysenteries. Dysentery is prevalent throughout this region, where the unhygienic habits of the people and the abundance of flies promote the spread of intestinal infections. From 800 to 1,000 cases are treated annually in the civilian hospitals and dispensaries in the Colony. Amebic dysentery predominates among the few cases in which the differential diagnosis is established, but a large proportion of the remainder are probably bacillary infections. Of the 339 cases recorded in 1949, 1 was diagnosed as bacillary dysentery and 48 as amebic, while 140 were unclassified. The percentage of carriers of *Endamoeba histolytica* is believed to be high: it has been estimated at 40 to 50 per cent among immigrants from Yunnan, many of whom are engaged in the handling of foodstuffs in the Colony.

Amebic and bacillary dysentery, as well as diarrhea and enteritis, are grouped together as "dysentery" in the official statistics. In each of the 5 years 1946-50, the dysentery deaths numbered 334 to 406, or approximately 20 to 25 per cent of the recorded mortality in the Colony. Among the 393 deaths reported in 1950 as due to dysentery, 107 were among the immigrant population. The younger age groups are most seriously affected, and the local en-

diarrhea suggest undernutrition and incorrect methods of feeding as important underlying factors. The deaths in infants under 1 year of age totaled 115 in 1950, or about 44 per cent of the known dysentery deaths.

No precise information is available regarding bacillary and amebic dysentery in the Protectorate, but the high rate of infection among visitors to Aden Colony suggests that both are widespread.

Cholera. Cholera has not been reported from Aden within the present century, although outbreaks have followed its introduction in the past. Since no record exists of its presence in the Hadhramaut, it is probable that the disease was largely confined to the port towns.

During the 1947 outbreak in Egypt, traffic through Aden was increased due to the quarantine restrictions imposed on Egyptian ports. Special precautions were taken by the health authorities to prevent the admission of infected individuals or goods by sea, land or air routes. Immunization against cholera was also provided for all persons handling shipping and for all health service personnel.

Helminthiases. Schistosomiasis is endemic in scattered localities in Western Aden Protectorate, especially in the highland districts above 2,000 feet elevation. Foci of *Schistosoma haematobium* are known to exist in the Jebel Jihaf and Dhala' plateau country, in the Wadi Tiban area around Musaimir, and in the vicinity of Tur an Baha, Hawsani and Khor 'Umaira. *S. mansoni* is apparently more restricted in distribution, but it is found in the Jebel Jihaf and the Wadi Tiban regions. No locally acquired infections are reported from the Colony, although numerous cases among persons from the interior are treated in the civilian hospitals each year. A large proportion of the cases seen in Aden Colony come from Yemen or from the Dhala' and the Musaimir districts.

The intermediate snail hosts of *S. haematobium* and *S. mansoni* have not been definitely established, but Bulinus and Planor-

[illegible]

[illegible] of the affected foci.

Ancylostomiasis. Hookworm infection occurs in Lahej and a few agricultural centers in Western Aden Protectorate. *Necator americanus* has been identified in the cases treated at the Civil Hospital in Aden.[20]

Other Helminthic Infections. Infections with one or more types of intestinal worms are prevalent, particularly among the peoples of the Protectorate. *Ascaris* is widespread. Trichuriasis and, to a lesser extent, enterobiasis are common. Hydatid disease is reported among individuals from the Colony and from the interior. Infection with the beef tapeworm, *Taenia saginata*, is enzootic among the cattle in the tribal districts, and human infections are undoubtedly frequent. Cases are occasionally encountered among immigrant families in the Colony. The pork tapeworm, *T. solium*, is rare, but infections are sometimes seen in the Aden hospitals.

Other Infections. *Brucella melitensis* is enzootic among the goats in this area, and Malta fever is diagnosed from time to time in the Colony hospitals and dispensaries.

Diseases Spread Chiefly Through the Respiratory Tract

Tuberculosis. Tuberculosis is one of the most prominent diseases affecting the inhabitants of southern Arabia, but no precise information is available, except for Aden Colony. The high degree of malnutrition and overcrowding, and the low standards of personal hygiene and sanitation prevailing among large sections of the population, favor the spread of the infection. The disease is probably prevalent among the women who are confined to close quarters by the *purdah* system and among the young children in close contact with them. In a small tuberculin test survey covering 95 Aden township schoolboys of 7 to 12 years of age, in 1941,[3] positive reactions were obtained in 36 per cent—a rate which ranks high among those usually found in

year for evidence of plague. The disease has not been reported from the Protectorate.

Other Infections. Localized outbreaks of louse-borne relapsing fever have been recorded from the Protectorate, but no indigenous cases have been encountered in Aden. Cases of relapsing fever were frequently discovered at the time of the typhus outbreaks in 1944-45.

Occasional cases of kala-azar are seen in the Colony hospitals, usually among immigrants from Yemen. Two cases, in which the diagnosis of kala-azar was confirmed by spleen puncture, were recently reported from the Civil Hospital.[1] Both originated in southern Yemen, one from the vicinity of Ta'izz and the other from a village near the border of Western Aden Protectorate. Sporadic cases of Oriental sore are also treated in Aden, but the extent of infection in the hinterland is uncertain.

Cases suspected of being sandfly fever are common. The vector, *Phlebotomus papatasii*, is widely distributed. Guinea worm infection is endemic in the Hadhramaut and in certain coastal districts in the Protectorate. Imported cases are often observed in Aden Colony. Travelers from endemic centers in Africa thought to be suffering from yellow fever are sometimes admitted to the Colony hospitals, but no indigenous cases have been reported.

Nutritional Diseases

Undernutrition is prevalent, particularly among the immigrant laborers in Aden and the poorer villagers and the Bedouin in the hinterland. Few studies of the prevalence of nutritional diseases have been made, but, in view of the inadequate diet of large sections of the population, deficiency conditions are probably numerous, particularly as regards protein and vitamins C, A and riboflavin of the B complex. Rickets is common in the Protectorate, while minor symptoms of the disease were detected in 17 per cent of 264 schoolchildren examined in Aden township in 1945. Spongy gums, gingivitis and other signs of vitamin C de-

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...ficiency are widespread. Pellagrous lesions of the skin are often encountered among the peoples of the Protectorate. In a survey of 318 Arab schoolboys in Aden township in 1948, no cases of overt deficiency were found, but enlargement of the liver, possibly suggestive of low protein intake, was revealed in 27 per cent.

Miscellaneous Conditions

A small outbreak of epidemic muscular rheumatism, classified as Bornholm disease, was reported from Aden in 1946. It involved 35 persons—34 British and 1 Arab.

Hepatic cirrhosis is one of the most frequent conditions seen at the Civil Hospital. Local physicians have noted that most of the cases come from malarious regions where qat is widely used, but the underlying causes have not been investigated.

Chewing the leaves of *Catha edulis*, or qat, is a general custom in Western Aden Protectorate. The leaf juices contain a stimulant, and habitual indulgence is said to produce loss of appetite, sleeplessness and a variety of more serious nervous disorders. Local observers believe that addiction to the drug contributes to the widespread undernutrition among the people.

SUMMARY

The Colony of Aden and the adjacent Protectorate, on the southern coast of Arabia, have been British dependencies for over a century. The population of the Colony, including the port of Aden, was enumerated at 80,516 in the census of 1946, and calculated at over 100,000 in 1950. The Protectorate territory comprises two administrative divisions—Western Aden Protectorate and Eastern Aden Protectorate, in which the estimated population for 1948 was about 350,000 and 300,000, respectively. The local governments are tribal and diverse in organization, ranging from sultanates to smaller autonomous units. The inhabitants of both the Colony and the Protectorate are predominantly Arabs and adherents of Islam.

63.Simmons et al G-6 (1961-1962) 1964
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the Colony. Undernutrition and avitaminosis are widespread, but the prevalence of specific nutritional deficiencies is not accurately known.

Dysentery, tuberculosis, trachoma and malaria are the most prominent disease problems, although indigenous malaria has now been largely eradicated from the Colony. Smallpox is frequently epidemic in the interior, but vaccination is compulsory in the Colony, and no outbreaks of local origin have been recorded since 1939. Serious epidemics of louse-borne typhus have occurred within recent years in the Western Aden Protectorate. Skin diseases, pneumonia, helminthiases and venereal infections are prevalent and widely distributed. Typhoid fever, measles and other respiratory diseases of childhood, and probably murine typhus and sandfly fever, are endemic. Leprosy, schistosomiasis and louse-borne relapsing fever exist in certain localised areas. Diphtheria, meningococcus meningitis and poliomyelitis are sporadic in the Colony and probably in the Protectorate. The last outbreak of plague in the Colony was recorded in 1938, while cholera has not been present within this century. Cases of kala-azar, Oriental sore, hookworm and guinea worm infection are occasionally admitted to the Colony hospitals among individuals from the Protectorate or Yemen.

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